

REMARKS

Applicant has carefully reviewed and considered the Office Action mailed on July 3, 2003, and the references cited therewith.

No claims are amended, canceled, or added; as a result, claims 1-29, and 33-35 are now pending in this application.

§103 Rejection of the Claims

Claims 1-4, 6, 7, 13, 17-22, and 27 were rejected under 35 USC § 103(a) as being unpatentable over Shimizu et al. (U.S. Patent No. 5,949,109).

Independent claim 1 recites, among other elements, a substrate, a bonding pad, a power node, a first doped region connected to the bonding pad, and a second doped region connected to the power node, wherein “only one path” exists between the bonding pad and the power node through the substrate.

Shimizu et al. disclose a device having a different structure. FIG. 1 of Shimizu et al. shows a substrate 21, a bonding pad 25, a power node Vss, a first region 22 connects to bonding pad 25, a second region 23 connects to power node Vss, and a third region 24 also connects to power node Vss. In FIG. 1 of Shimizu et al., two different paths exist between bonding pad 25 and power node Vss. A first path exists between bonding pad 25 and power node Vss through substrate 21 and region 23. A second path exists between bonding pad 25 and power node Vss through substrate 21 and region 24. In contrast, claim 1 recites that “only one path” exists between the bonding pad and the power node through the substrate.

The Office Action, on page 3, indicates that FIG. 2 of Shimizu et al. shows only one path existed between the bonding pad and the power node through the substrate. Application respectfully disagrees. Shimizu et al. describe in column 1, lines 37-38, that FIG. 2 is an equivalent circuit of FIG. 1. Thus, FIG. 2 of Shimizu et al. represents a structure shown in FIG. 1. FIG. 2 of Shimizu et al shows a path between bonding path 25 and power node Vss via a parasitic transistor 27. Shimizu et al. describe in column 1, lines 41-44, that parasitic transistor 27 is formed by region 22, substrate 21, and both of the regions 23 and 24 of FIG. 1. FIG. 1 of Shimizu et al. shows two paths existed between bonding pad 25 and power node Vss. Because

FIG. 2 represents the structure shown in FIG. 1, two paths also exist between bonding pad 25 and power node Vss in FIG. 2.

The Office Action, on page 3, also indicates that regions 23 and 24 are connected together and therefore they are the same node, not two different nodes that provide two different paths. Applicant respectfully submits that in electrical circuits, the same node may have different paths leading to it. In FIG. 1 of Shimizu et al., power node Vss has two different paths leading to it: a first path including bonding pad 25, substrate 21, and region 23; and a second path including bonding pad 25, substrate 21, and region 24. Thus, although power node Vss of FIG. 1 of Shimizu et al. connects together regions 23 and 24, FIG. 1 of Shimizu et al. shows two different paths existed between bonding pad 25 and power node Vss.

Based on all of the reasons explained above, Shimizu et al. do not disclose a substrate, a bonding pad, a power node, a first doped region connected to the bonding pad, and a second doped region connected to the power node, wherein “only one path” exists between the bonding pad and the power node through the substrate. Thus, claim 1 is patentable over Shimizu et al. Therefore, Applicant requests that the rejection of claim 1 be reconsidered and withdrawn and that claim 1 and its dependent claims be allowed.

Independent claims 6, 7, 13, 17, and 27 recite elements similar to the elements of claims 1. Thus, claims 6, 7, 13, 17, and 27 are also patentable over Shimizu et al. for the reasons explained above regarding claim 1. Accordingly, Applicant requests that the rejection of claims 6, 7, 13, 17, and 27 be reconsidered and withdrawn and that claims 6, 7, 13, 17, and 27 and their dependent claims be allowed.

Claim 5 was rejected under 35 USC § 103(a) as being unpatentable over Shimizu et al. as applied to claims 1-4, 6, 7, 13, 17-22, and 27 above, and further in view of Yu et al. (U.S. Patent No. 5,889,309).

Claim 5 depends from claim 1 and incorporates the elements of claim 1. Thus, claim 1 is also patentable over Shimizu et al. and over the combination of Shimizu et al. and Yu et al. for the reasons explained above regarding claim 1. Therefore, Applicant requests that the rejection of claim 5 be reconsidered and withdrawn and that claim 5 be allowed.

Claims 23-26 and 28 were rejected under 35 USC § 103(a) as being unpatentable over Shimizu et al. as applied to claims 1-4, 6, 7, 13, 17-22, and 27 above, and further in view of Maekawa (U.S. Patent No. 6,163,056).

Independent claims 23 and 28 recite elements similar to the elements of claims 1. Thus, claims 23 and 28 are also are patentable over Shimizu et al. and over the combination of Shimizu et al. and Maekawa for the reasons explained above regarding claim 1. Accordingly, Applicant requests that the rejection of claims 23 and 28 be reconsidered and withdrawn and that claims 23 and 28 and dependent claims 24-26 be allowed.

Claims 29 and 33-35 were rejected under 35 USC § 103(a) as being unpatentable over Shimizu et al. as applied to claims 1-4, 6, 7, 13, 17-22, and 27 above, and further in view of Lin (U.S. Patent No. 6,246,122).

Independent claims 29 and 33-35 recite elements similar to the elements of claims 1. Thus, claims 29 and 33-35 are also are patentable over Shimizu et al. and over the combination of Shimizu et al. and Lin for the reasons explained above regarding claim 1. Accordingly, Applicant requests that the rejection of claims 29 and 33-35 be reconsidered and withdrawn and that claims 29 and 33-35 and their dependent claims be allowed.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's representative at (612) 373-6969 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop AF, Commissioner of Patents, P.O.Box 1450, Alexandria, VA 22313-1450, on this 30 day of September, 2003